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TITLE: Psychometric Properties of the Positive and Negative Affect Schedule (PANAS) in a Think-Aloud Cognitive Assessment with an Experimentally-Induced Distraction

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ABSTRACT BODY:

Abstract: Hsu and Colleges (2014) utilized the Articulated Thoughts in Simulated Situations (ATSS) think-aloud cognitive assessment paradigm to evaluate how distraction impacts cognitive and emotional processes under basic task performance, and found that cognitive but not emotional processes were compromised. Further verifying the ATSS's affective measure's reliability and validity, Classical Test Theory (CTT) was applied to assess the Positive and Negative Affect Schedule's (PANAS) psychometric properties, since the scale was measured before and after the distraction induction. Pre- and post-PANAS were not significantly different across the three distraction conditions, though post-anger and post-anxiety condition's diminished omega reliabilities suggests shifts in emotion . A better understanding of how distraction impacts the reliability and validity of assessments measuring affect holds important implications for future experimental and naturalistic studies employing affective assessment methods.

Supporting Summary: Hsu and Colleagues (2014) employed the Articulated Thoughts in Simulated Situations paradigm (ATSS; Davison et al., 1997) on participants (n=102) to simulate how distraction impacts basic task performances. From the ATSS battery, the Positive and Negative Affect Schedule (PANAS; Watson & Tellegen, 1988) was selected for psychometric testing since it was measured before and after the experiment. Seminal (Zevon & Tellegen, 1982) and follow-up studies (Clark & Watson, 1986; Watson, 1988) showed that the scale’s intercorrelations and internal consistency reliabilities were high, and that the two PA and NA factors accounted for 62.8% of the common variance and with a high convergent correlations rate (.89 to .95). RStudio and AMOS were utilized to obtain the descriptive and summary statistics, correlation matrix, total test scores, and reliability coefficients of the whole measure and each subscales, and for confirmatory factor analyses to assess goodness-of-fit, respectively. The pre- and post-experiment of PANAS measures were compared. Pre-experiment PANAS values echoed results in the seminal study (Watson & Tellegen, 1988). Interestingly, post-experiment PANAS values illustrated different patterns: Item means and frequencies reflected participants' emotional states in the neutral, anger, and anxiety conditions, despite the experimentally-induced distraction. Confirmatory factor analyses for pre- and post-PANAS suggests goodness-of-fit, though the Common-factor results ($\chi 2$ (170) = 746.43, $p < .05$) were better than Two-factor results ($\chi 2$ (170) = 513.13, $p < .05$) in both measures, suggesting positive and negative emotions aren't mutually exclusive and can occur simultaneously.